Engine 544J WH

 Cylinders
 6

 Valves Per Cylinder
 2

 Net Peak Power (IS09249)
 160 hp (116 kW) @ 1,900 rpm

 Net Rated Power
 145 hp (100 kW) @ 2,200 rpm

 Net Peak Torque (IS09249)
 485 lb.-ft. (650 Nm) @ 1,400 rpm

Fuel System electronically controlled rotary pump-line-nozzle
Lube System full-flow spin-on filter and integral cooler
Aspiration turbocharged, charge air cooled

#### **Transmission**

Type ...... countershaft-type power shift
Torque Converter ..... single stage, single phase

Shift Control. . . . . . . . . . electronically modulated, adaptive, load and speed dependent

Operator Interface . . . . . . steering-column or joystick-mounted F-N-R and gear-select lever, kick-down button on hydraulic lever

Shift Modes . . . . . . . . . . . . auto/manual, auto to 1st or 2nd, kick down or kick up/down, three clutch cutoff settings adjustable on switch pad

Travel Speeds\* Forward Reverse

 Gear 1.
 4.3 mph (6.9 km/h)
 4.5 mph (7.3 km/h)

 Gear 2.
 7.4 mph (11.9 km/h)
 7.8 mph (12.6 km/h)

 Gear 3.
 14.2 mph (22.8 km/h)
 15.0 mph (24.1 km/h)

\*Equipped with 20.5 X 25 solid rubber tires.

### Axles/Brakes

Final Drives . . . . . . heavy-duty inboard planetary

Rear Axle Oscillation, Stop to Stop\* . . . . . . . . . . 16 deg.

Brakes (conform to SAE J1473, ISO3450)

Service Brakes . . . . . . . . hydraulically actuated, inboard, carrier mounted, pressure oil cooled, self adjusting, multi-disc

Parking Brake . . . . . . . . . . . . . . . . automatic spring applied, hydraulically released, oil cooled, multi-disc

\*Equipped with 20.5 X 25 solid rubber tires.

# **Hydraulic System/Steering**

Steering (conforms to SAE J1511)

Type ... power, fully hydraulic
Pressure ... 3,650 psi (25 167 kPa) relief
Articulation Angle ... 80-deg. arc (40 deg. each direction)

Hydraulic Cycle Times

 Raise
 5.7 sec.

 Dump
 1.2 sec.

Turning Radius (measured to centerline of

# Maximum Lift Capacity 544J WH

	Standard Boom		High Lift	
SAE Heaped Capacity	. 4.0-cuyd. (3.1 m³)	5.0-cuyd. (3.8 m³)	4.0-cuyd. (3.1 m³)	5.0-cuyd. (3.8 m³)
	standard lip	standard lip	standard lip	standard lip
Lift at Ground Level	. 22,436 lb. (10 177 kg)	18,619 lb. (8445 kg)	23,605 lb. (10 707 kg)	20,158 lb. (9144 kg)
Lift at Maximum Height	. 14,103 lb. (6397 kg)	13,722 lb. (6224 kg)	12,147 lb. (5510 kg)	11,768 lb. (5338 kg)

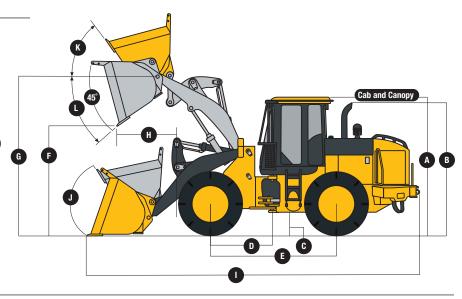
## **Tires**

Choice of	Tread Width	Width Over Tires	Change In Vertical Height
20.5 X 25 Solid Rubber Tires	76.8 in. (1951 mm)	97.7 in. (2482 mm)	0 in. (0 mm)
1. F P. L 12 1. P 9. 1. 1.			

L-5 radial or bias ply tires available. Both tire types require 8-deg. axle stops.

# Capacities (U.S.)

Fuel Tank (with ground-level fueling) 85 gal. (322 L)
Cooling System
Engine Lubrication, Including Full-Flow Spin-
On Filter
Powershift Transmission, Including Vertical
Cartridge Filter
Differential (each axle)
Front
Rear
Loader Hydraulic Reservoir and Filters 25.5 gal. (96.5 L)
Parking Brake



# **Dimensions with Pin-On Type Waste Buckets**

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	Bucket Lip Capacity (equipped with bolt-on			
	cutting edges)		High Lift	
	Capacity, Heaped SAE	5.0-cuyd. (3.8 m³)	4.0-cuyd. (3.1 m³)	5.0-cuyd. (3.8 m³)
	standard lip	standard lip	standard lip	standard lip
	Capacity, Struck SAE	4.4-cuyd. (3.4 m³)	3.5-cuyd. (2.7 m³)	4.4-cuyd. (3.4 m³)
	standard lip	standard lip	standard lip	standard lip
	<b>A</b> Height to Top of Cab	10 ft. 10 in. (3.29 m)	10 ft. 10 in. (3.29 m)	10 ft. 10 in. (3.29 m)
	<b>B</b> Height to Top of Exhaust	10 ft. 9 in. (3.28 m)	10 ft. 9 in. (3.28 m)	10 ft. 9 in. (3.28 m)
	<b>C</b> Ground Clearance	18 in. (457 mm)	18 in. (457 mm)	18 in. (457 mm)
	<b>D</b> Length from Centerline to Front Axle 57 in. (1.45 m)	57 in. (1.45 m)	57 in. (1.45 m)	57 in. (1.45 m)
	<b>E</b> Wheelbase	114 in. (2.90 m)	114 in. (2.90 m)	114 in. (2.90 m)
	<b>F</b> Dump Height 8 ft. 11 in. (2.72 m)	8 ft. 7 in. (2.62 m)	10 ft. 1 in. (3.08 m)	9 ft. 9 in. (2.97 m)
	<b>G</b> Height to Hinge Pin, Fully Raised 12 ft. 9 in. (3.89 m)	12 ft. 9 in. (3.89 m)	13 ft. 10 in. (4.22 m)	13 ft. 10 in. (4.22 m)
	<b>H</b> Dump Reach	41 in. (1.04 m)	36 in. (0.92 m)	41 in. (1.04 m)
	l Overall Length	24 ft. 11 in. (7.59 m)	25 ft. 6 in. (7.77 m)	26 ft. 1 in. (7.95 m)
	<b>J</b> Maximum Rollback at Ground Level 35 deg.	35 deg.	35 deg.	35 deg.
	<b>K</b> Maximum Rollback at Full Height 51 deg.	51 deg.	45 deg.	45 deg.
	L Maximum Dump Angle at Full Height 49 deg.	49 deg.	45 deg.	45 deg.
	Breakout Force, SAE J732C	18,262 lb. (8284 kg)	19,371 lb. (8787 kg)	16,721 lb. (7585 kg)
	Tipping Load, Straight	23,768 lb. (10 781 kg)	20,981 lb. (9517 kg)	20,090 lb. (9113 kg)
	Tipping Load, 40-Deg. Full Turn, SAE 21,497 lb. (9751 kg)	20,588 lb. (9339 kg)	18,156 (8235 kg)	17,325 lb. (7858 kg)
	Bucket Width	8 ft. 10 in. (2.69 m)	8 ft. 10 in. (2.69 m)	8 ft. 10 in. (2.69 m)
	Loader Clearance Circle, Bucket In Carry Position 38 ft. 8 in. (11.79 m)	39 ft. 0 in. (11.89 m)	39 ft. 7 in. (12.07 m)	39 ft. 11 in. (12.17 m)
	Operating Weight	34,189 lb. (15 508 kg)	33,990 (15 418 kg)	34,391 lb. (15 599 kg)

Loader operating information is based on a machine with all standard equipment; waste handler complete protection package; 20.5 X 25 solid rubber tires; high-lift boom; ROPS cab; differential lock front axle with standard rear axle; two-spool valve with two-lever control; heater and defroster; 175-lb. (79 kg) operator; and full fuel tank. This information is affected by tire size, ballast, and different attachments.

Engine 624J WH

Type ....... John Deere PowerTech 6068H; certified to EPA Tier 2 emissions

 Net Peak Power (IS09249)
 180 hp (129 kW) @ 1,800 rpm

 Net Rated Power
 165 hp (119 kW) @ 2,200 rpm

 Net Peak Torque (IS09249)
 605 lb.-ft. (810 Nm) @ 1,000 rpm

Fuel System.....high-pressure common rail

Lube System ... full-flow spin-on filter and integral cooler Aspiration ... turbocharged, charge air cooled

#### **Transmission**

Torque Converter . . . . . . . . . . . . . . . single stage, single phase

Shift Control. . . . . . . . . . electronically modulated, adaptive, load and speed dependent

Shift Modes . . . . . . . . . . . . auto/manual, auto to 1st or 2nd, kick down or kick up/down, three clutch cutoff settings adjustable on switch pad

Travel Speeds\* Forward Reverse

 Gear 1.
 4.5 mph (7.2 km/h)
 4.7 mph (7.5 km/h)

 Gear 2.
 7.7 mph (12.4 km/h)
 8.1 mph (13.1 km/h)

 Gear 3.
 15.2 mph (24.5 km/h)
 16.0 mph (25.8 km/h)

#### Axles/Brakes

Final Drives . . . . . . . . . . . heavy-duty inboard planetary

Rear Axle Oscillation, Stop to Stop\* . . . . . . . . . . 16 deg.

Brakes (conform to SAE J1473, ISO3450)

Parking Brake . . . . . . . . . . automatic spring applied, hydraulically released, oil cooled, multi-disc

## **Hydraulic System/Steering**

Pump (loader and steering) ....... variable-displacement, axial-piston pump; closed-center, pressure-compensating system

Steering (conforms to SAE J1511)

Type ... power, fully hydraulic
Pressure ... 3,600 psi (24 850 kPa) relief
Articulation Angle ... 80-deg. arc (40 deg. each direction)

Hydraulic Cycle Times

Lower . . . . . . . . . . . . . . . . . 2.7 sec. (float down)

Turning Radius (measured to centerline

<sup>\*</sup>Equipped with 20.5 X 25 solid rubber tires.

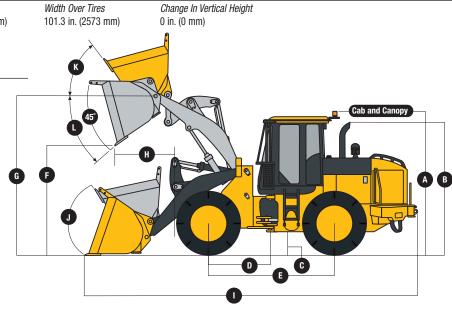
<sup>\*</sup>Equipped with 20.5 X 25 solid rubber tires.

Maximum Lift Capacity	624J WH					
	Standard Boom			High Lift		
SAE Heaped Capacity	. 4.0-cuyd. (3.1 m³) standard lip	5.0-cuyd. (3.8 m³) standard lip	6.0-cuyd. (4.6 m³) standard lip	4.0-cuyd. (3.1 m³) standard lip	5.0-cuyd. (3.8 m³) standard lip	6.0-cuyd. (4.6 m³) standard lip
Lift at Ground Level	. 29,335 lb.	28,220 lb.	28,041 lb.	25,629 lb.	24,749 lb.	24,442 lb.
	(13 306 kg)	(12 800 kg)	(12 719 kg)	(11 625 kg)	(11 226 kg)	(11 087 kg)
Lift at Maximum Height	. 16,615 lb.	16,240 lb.	15,717 lb.	15,093 lb.	14,729 lb.	14,205 lb.
	(7536 kg)	(7366 kg)	(7129 kg)	(6846 kg)	(6681 kg)	(6443 kg)
Tires						

**Tires** 

Capacities (U.S.)

Fuel Tank (with ground-level fueling) 92 gal. (348 L)
Cooling System 23 qt. (22 L)
Engine Lubrication, Including Full-Flow SpinOn Filter 25 qt. (24 L)
Powershift Transmission, Including Vertical
Cartridge Filter 24 qt. (23 L)
Differential (each axle)
Front 26 qt. (24.5 L)
Rear 21 qt. (20 L)
Loader Hydraulic Reservoir and Filters 31.5 gal. (119 L)
Parking Brake 10 oz. (0.3 L)



**Dimensions with Pin-On Type Waste Buckets** 

Bucket Lip Capacity (equipped with bolt-on					
cutting edges)			High Lift		
Capacity, Heaped SAE	m³) 5.0-cuyd. (3.8 m³) standard lip	6.0-cuyd. (4.6 m³) standard lip	4.0-cuyd. (3.1 m³) standard lip	5.0-cuyd. (3.8 m³) standard lip	6.0-cuyd. (4.6 m³) standard lip
Capacity, Struck SAE	m³) 4.3-cuyd. (3.3 m³) standard lip	4.6-cuyd. (3.5 m³) standard lip	3.5-cuyd. (2.7 m³) standard lip	3.8-cuyd. (2.9 m³) standard lip	4.6-cuyd. (3.5 m³) standard lip
<b>A</b> Height to Top of Cab	m) 11 ft. 2 in. (3.40 m)	11 ft. 2 in. (3.40 m)	11 ft. 2 in. (3.40 m)	11 ft. 2 in. (3.40 m)	11 ft. 2 in. (3.40 m)
<b>B</b> Height to Top of Exhaust	m) 11 ft. 0 in. (3.35 m)	11 ft. 0 in. (3.35 m)	11 ft. 0 in. (3.35 m)	11 ft. 0 in. (3.35 m)	11 ft. 0 in. (3.35 m)
<b>C</b> Ground Clearance	n) 18.7 in. (475 mm)	18.7 in. (475 mm)	18.7 in. (475 mm)	18.7 in. (475 mm)	18.7 in. (475 mm)
<b>D</b> Length from Centerline to Front Axle 60 in. (1.52 m)	60 in. (1.52 m)	60 in. (1.52 m)	60 in. (1.52 m)	60 in. (1.52 m)	60 in. (1.52 m)
<b>E</b> Wheelbase	119 in. (3.02 m)	119 in. (3.02 m)	119 in. (3.02 m)	119 in. (3.02 m)	119 in. (3.02 m)
<b>F</b> Dump Height	n) 9 ft. 1 in. (2.78 m)	8 ft. 7 in. (2.61 m)	10 ft. 10 in. (3.31 m)	10 ft. 6 in. (3.20 m)	10 ft. 0 in. (3.05 m)
<b>G</b> Height to Hinge Pin, Fully Raised 13 ft. 2 in. (4.01	m) 13 ft. 2 in. (4.01 m)	13 ft. 2 in. (4.01 m)	14 ft. 4 in. (4.37 m)	14 ft. 4 in. (4.37 m)	14 ft. 4 in. (4.37 m)
<b>H</b> Dump Reach	40 in. (1.01 m)	46 in. (1.17 m)	41 in. (1.05 m)	46 in. (1.18 m)	53 in. (1.35 m)
l Overall Length	m) 25 ft. 4 in. (7.72 m)	26 ft. 1 in. (7.95 m)	26 ft. 2 in. (7.98 m)	26 ft. 9 in. (8.15 m)	27 ft. 6 in. (8.38 m)
<b>J</b> Maximum Rollback at Ground Level 38 deg.	38 deg.	38 deg.	39 deg.	39 deg.	39 deg.
<b>K</b> Maximum Rollback at Full Height 55 deg.	55 deg.	55 deg.	49 deg.	49 deg.	49 deg.
L Maximum Dump Angle at Full Height 45 deg.	45 deg.	45 deg.	41 deg.	41 deg.	41 deg.
Breakout Force, SAE J732C 29,774 lb.	25,567 lb.	21,300 lb.	26,991 lb.	23,137 lb.	19,223 lb.
(13 505 kg)	(11 597 kg)	(9662 kg)	(12 243 kg)	(10 495 kg)	(8719 kg)
Tipping Load, Straight	28,740 lb.	28,363 lb.	24,253 lb.	23,448 lb.	23,042 lb.
(13 442 kg)	(13 036 kg)	(12 865 kg)	(11 001 kg)	(10 636 kg)	(10 452 kg)
Tipping Load, 40-Deg. Full Turn, SAE	24,976 lb.	24,568 lb.	21,033 lb.	20,277 lb.	19,843 lb.
(11 709 kg) Bucket Width	(11 329 kg) n) 9 ft. 7 in. (2.91 m)	(11 144 kg) 9 ft. 7 in. (2.91 m)	(9540 kg)	(9197 kg) 9 ft. 7 in. (2.91 m)	(9001 kg) 9 ft. 7 in. (2.91 m)
Loader Clearance Circle, Bucket In Carry Position 40 ft. 2 in. (12.24	, , ,	, ,	9 ft. 7 in. (2.91 m) 40 ft. 4 in. (12.29 m)	41 ft. 8 in. (12.70 m)	42 ft. 2 in. (12.85 m)
Operating Weight	38,579 lb.	39,114 lb.	38,460 lb.	38,876 lb.	39,412 lb.
(17 310 kg)	(17 499 kg)	(17 742 kg)	(17 445 kg)	(17 634 kg)	(17 877 kg)
(11 010 kg)	(	(=9)	( 9)	( 559)	( 59)

Loader operating information is based on a machine with all standard equipment; waste handler complete protection package; 20.5 X 25 solid rubber tires; high-lift boom; ROPS cab; differential lock front axle with standard rear axle; two-spool valve with two-lever control; heater and defroster; 175-lb. (79 kg) operator; and full fuel tank. This information is affected by tire size, ballast, and different attachments.

#### 544J / 624J WASTE HANDLERS

Key: ● Standard equipment ▲ Optional equipment

- Certified to EPA Tier 2 emissions
  - Antifreeze, -34°F (-37°C)
- Pre-cleaner
- Ŏ • Wet sleeve cylinder liners
- Electronically controlled fuel system
- Automatic derating when system temperatures
- Monitor-selected high-altitude compensation
- Underhood muffler with large exhaust stack
- Underhood dual-element air cleaner with restriction
- 10-micron primary fuel filter/water separator
- 2-micron final fuel filter
- Heavy-duty steel fuel tank guard
- 500-hour full-flow spin-on oil filter
- Polyvee drive belt with automatic tensioner Ether start aid (required for cold starting down to -13°F [-25°C])
- Intake air heater (required for cold starting down to 0°F [-18°C])
- 110-volt engine coolant heater (required for cold starting below -13°F [-25°C])
- Chrome exhaust stack
- Environmentally friendly engine oil drain

#### Cooling

- Heavy-duty trash-resistant high-ambient cooling package
- Two-side access to all coolers
- Cooling system isolated from engine compartment Proportionally controlled (cool-on-demand), hydrauli-
- cally driven, swing-out fan Intercooler (air/air - 6.5 fins per in.)
- Transmission oil cooler (oil/air 6.5 fins per in.)
- Hydraulic oil cooler (oil/air 6.5 fins per in.)
- Engine radiator (7.5 fins per in.)
- Integral engine oil cooler
- Coolant recovery tank
- Fan quard
- Axle coolers (6.5 fins per in.)
- Reversing fan drive auto control with manual
- Harsh-environment coolers for corrosive environments

#### **Power Train**

- ZF torque-converter powershift transmission 3F/3R Electronically controlled, adaptive, load- and speeddependent shift modulation
- Clutch calibration engageable from cab monitor
- Clutch cut-off thresholds settable from switch pad
- Auto-shift/manual-shift modes Ŏ
- Gear kickdown button in hydraulic-control lever
- 1,000-hour transmission filter
- Integral transmission sight gauge/fill tube
- Spring-applied, hydraulically released, oil-cooled, multi-disc park brake
- Lube-for-life U-joints
- Heavy-duty inboard planetary final drives
- Hydraulically actuated, inboard, carrier-mounted, pressure-oil-cooled, self-adjusting, multi-disc brakes
- Top axle housing fill and dipstick port
- Front axle with hydraulic locking front and conventional rear differentials
- Front and rear axles with hydraulic locking differentials
- Remote-axle breathers

#### 544J 624J Hydraulic System

- Pressure-compensating load-sensing hydraulic
- In-cab adjustable automatic bucket positioner
  - In-cab adjustable automatic boom height kickout
- In-cab adjustable automatic boom return-to-carry control
- Reservoir sight gauge
- Spin-on hydraulic filters, vertical mounting
- Hydraulic lever lockout
- Two-function hydraulic valve with single-lever control
- Two-function hydraulic valve with two-lever fingertip controls and adjustable wristrest
- Three-function hydraulic valve with single-lever control and auxiliary lever for third function
- Three-function hydraulic valve with two-lever fingertip controls, adjustable wristrest, and auxiliary lever for third function
- Four-function hydraulic valve, with dual single-lever controls
- Hydraulic conversion kits, two-to-three- and threeto-four-function valves
- Ride control, automatic type
- Hydraulic control system for quick-coupler locking pins

#### **Electrical**

- 24-volt electrical system
- Solid-state electrical power distribution system
- Batteries, high capacity (2), 12 volt with 950 CCA, 200-min. rated reserve each
- Alternator, high capacity, 80 amps and 24 volts
- Alternator trash cover
- Lights (conform to SAE J99): Driving with guards / Turn signals and flashers / Stop and taillights
- LED heavy-duty taillights and turn signals
- Work lights, front (2) and rear (2)
- Horn, with push button in center of steering wheel (conforms to SAE J994, J1446)
- Reverse warning alarm (conforms to SAE J994, J1446)
- Computerized multifunction monitor
  - Audible and visual warnings: Amber caution / Red stop / Analog gauges: Engine coolant temperature, transmission oil temperature, fuel level, hydraulic oil temperature, engine oil pressure / Digital instruments: Engine rpm, odometer, transmission gear indicator, speedometer, hour meter / Operator warning lights: Check engine, engine oil pressure, engine air filter restriction, battery voltage, transmission filter restriction, brake pressure, hydraulic oil filter, fasten seat belt, transmission fault, hydraulic oil
- temperature Indicator lights: Park brake / Ride control / Turn signals and warning flashers / Coupler pin disconnect / Engine preheater / Secondary steering / Work lights
- Radio-ready cab: Fused 24-volt radio electrical lead, and fused lead for optional Deere 5-amp and 10-amp voltage converters
- Built-in diagnostics: Fault code retrieval
- AM/FM/WB stereo radio
- AM/FM/WB stereo radio with cassette
- AM/FM/WB stereo radio with CD
- 5-amp, 12-volt convertor with one power plug 10-amp, 12-volt convertor with two power plugs
- Electrical corrosion-prevention package
- Strobe light wired to master electrical disconnect

\*See your John Deere dealer for further information.

#### 544J 624J Operator's Station

- Cab (conforms to SAE J1040C APR88): ROPS/FOPS / Heater/defroster / Multiplane isolation mounted for noise/vibration reduction / Front and rear windshield washers and intermittent wipers / Tinted safety glass
- Air conditioning
- Seat belt, 3 in. (76 mm), with retractor
- Seat, deluxe cloth covered with deep foam, high back, air suspension, adjustable for weight-height, fore-aft position, backrest tilt, and armrest angle
- Cup holder, personal cooler holder
- Sun visor for cab
- Storage compartment for operator's manual and other items
- Rubber floormat
- Steering wheel, textured with spinner knob
  - Tilt steering column
- Steering wheel, textured with spinner knob
- Rearview mirrors, outside (2) and inside (1) (conform to SAE J985)
- Handholds and steps, ergonomically located and slip resistant (conform to SAE J185)

### **Waste Handler Package**

- Waste handler guards: Articulation guards / Axle seal quards / Boom cylinder and hydraulic lines guard / Bucket cylinder hydraulic lines, zerk, and sensor guard / Drive-shaft guard / Extreme-duty front loader frame cover with handles / Extreme-duty transmission side guards / Lower boom and bucket grease-fitting guards / Rear loader frame cover
- Cab floor-mounted lockable master electrical disconnect switch
- Extreme-duty cab entry steps
- Extreme-duty hydraulic bottom guards (fuel tank, loader frame, engine frame)
- Bottom guards, bolt-on, front frame and transmission
- Full-frontal cab window guard (high-visibility version not designed to SAE J1084)
- Rear-access platforms with step, handhold, and tiedowns

#### Loader Linkage

- Loader boom service locking bar (conforms to SAE J38)
- Z-bar loader linkage
- High-lift Z-bar loader linkage

# **Buckets and Attachments**

- Full line of Deere pin-on and hook-on buckets with selection of bolt-on cutting edges and teeth-segmented bolt-on cutting edges\*
- Quick-coupler which accepts Deere and JRB attachments
- Hydraulic control system for quick-coupler locking pins, includes all controls in cab, lines, and valves
- Loadrite<sup>™</sup> weighing system\*

#### **Tires**

- 20.5 X 25
- L-5 radial or bias ply
- Less wheels and tires
- Multi-piece rims

#### **Other**

- Articulation locking bar (conforms to SAE J276)
- Vandal protection, includes lockable engine enclosure, rear grille, and fuel fill
- Counterweight, built-in
- Drawbar, with locking pin
- Lift hooks
- lackFire extinguisher
- License-plate bracket Secondary steering



Net engine power is with standard equipment including air cleaner, exhaust system, alternator, and cooling fan at test conditions per ISO9249. No derating is required up to 5,000-ft. (1525 m) altitude.

Specifications and design subject to change without notice. Wherever applicable, specifications are in accordance with SAE standards, Except where otherwise noted, these specifications are based on a unit with all standard equipment, waste handler protection package, high-lift boom, 20.5 X 25 solid rubber tires, ROPS cab, full fuel tank, and 175-lb. (79 kg) operator.

